

IN THE CLAIMS:

Claim 1 (Currently Amended): A dry etching method for forming a resist film on a substrate comprising:

irradiating a substrate with a resist film formed thereon with radiation having a wavelength of not more than 195 nm to form a resist pattern having a minimum line width of not more than 200 nm, and

subjecting the substrate having the resist pattern formed thereon to dry etching using a ~~fluorine-containing compound having 4 to 6 carbon atoms and at least one unsaturated bond selected from the group consisting of a triple bond, a double bond and both a double bond and a triple bond~~ as an etching gas, wherein the ~~fluorine-containing compound having the triple bond is one selected from the group consisting of perfluoro-1-butyne, perfluoro-1-pentyne, perfluoro-2-pentyne, perfluoro-1,3-pentadiyne, perfluoro-3-hexyne, perfluoro-1,3-hexadiyne, perfluoro-1,4-hexadiyne, perfluoro-1,5-hexadiyne and perfluoro-2,4-hexadiyne~~ or at least one kind of fluoropentene selected from 1,1,1,2,4,4,5,5,5-nonafluoro-2-pentene, 1,1,1,3,4,4,5,5-nonafluoro-2-pentene and perfluoro-2-pentene.

Claim 2 (Original): The dry etching method according to claim 1, wherein the resist film is formed from a high molecular weight compound containing 0% to 10% by weight of repeating units having an aromatic ring structure.

Claims 3-5: (Cancelled).

Claim 6 (Previously Presented): The dry etching method according to claim 1, wherein the dry etching is carried out under irradiation with plasma having a plasma density of at least 10^{10} ions/cm³.

Claim 7 (Currently Amended): A dry etching gas comprised of a fluorine-containing compound ~~having 4 to 6 carbon atoms and at least one unsaturated bond~~, and used for dry etching for a resist film forming a resist pattern having a minimum line width of not more than 200 nm at irradiation with radiation having a wavelength of not more than 195 nm; said fluorine-containing compound ~~has 4 to 6 carbon atoms and at least one unsaturated bond~~ being selected from the group consisting of ~~a triple bond, a double bond and both a double bond and a triple bond~~, wherein the fluorine-containing compound ~~having the triple bond is one selected from the group consisting of perfluoro-1-butyne, perfluoro-1-pentyne, perfluoro-2-pentyne, perfluoro-1,3-pentadiyne, perfluoro-1,4-pentadiyne, perfluoro-1-hexyne, perfluoro-2-hexyne, perfluoro-3-hexyne, perfluoro-1,3-hexadiyne, perfluoro-1,4-hexadiyne, perfluoro-1,5-hexadiyne and perfluoro-2,4-hexadiyne~~ 1,1,1,2,4,4,5,5,5-nonafluoro-2-pentene, 1,1,1,3,4,4,5,5-nonafluoro-2-pentene and perfluoro-2-pentene.

Claim 8-12: (Cancelled).